

WCCF 84

**Who is
Daniel Bernoulli,
anyway, and what
is his name doing
on the most
revolutionary
data storage device
of the decade?**



First questions first.

If you own or use an IBM PC or XT, you are already familiar with revolutions that come in a box. Which is why we would like to introduce you to another one—the first mass storage device you should think of for a full range of application requirements, and perhaps the last one you'll ever need.

We call it The Bernoulli Box. But before we answer the question that appears on the cover of this flier, we should address another one first: *What makes The Bernoulli Box so special?*

Simply put, The Bernoulli Box is a cartridge-based disk storage subsystem that utilizes a new, and thoroughly proven, data storage technology. Designed specifically for the IBM PC and XT by IOMEGA Corporation, this truly unique product combines the performance standards of Winchester disks with the cost and convenience of removable floppies. Each cartridge houses a flexible disk that stores 10 Mbytes of data. That's right—10 Mbytes of data on a flexible disk. The levels of data and mechanical reliability, as well as the dramatically low cost-per-megabyte with which this mass storage is provided are, in a word, unparalleled.

How all of this is achieved leads us back to the question on the front. Who is this Bernoulli fellow?



TMThe Bernoulli Box is a trademark of IOMEGA Corporation.

The Bernoulli Box

The square roots of our boxed revolution.

Daniel Bernoulli was a Swiss mathematician who lived a rather ordinary life before his death in 1782. He did, however, make one extraordinary discovery in the area of fluid mechanics that now bears his name: *Bernoulli's Law*. This is not to be confused with *Bernoulli's Number*, which belonged to his equally brainy father and has to do with probability theory. The probability that we can keep you interested in the intricacies of his son's law is small. Suffice to say that it has to do with the pressure of a stream of fluid decreasing as the speed of the flow increases.

Since then, aircraft builders have used Daniel Bernoulli's concept to design wing structures. Baseball pitchers have used it, perhaps without the depth of understanding of its subtler aspects, to get a horsehide sphere to do the strangest things. And most important—for us, anyway, and hopefully for you—IOMEGA's engineers used it.

Rigid Media

Reliability
Non-Contact
Recording
Rapid Access
Fast Data Transfer
High Capacity

Flexible Media

Low Cost
Removable Media
Design Simplicity
Low Power

The Result: IOMEGA's Bernoulli Technology

High Reliability
High Capacity
Low Cost
Removable Media
Low Power
Simplicity

How we created a new data storage technology—in Ogden, Utah.

We're not sure what Daniel Bernoulli would have thought of today's Microcomputer Age. We feel confident that he would have been proud of how the IOMEGA engineering team created a leading-edge technology product for this age around his idea—then gave it his name.

We think he would have been impressed with our non-contact flexible medium recording technique and how it allows for an exceptionally stable head-to-disk flying height (10 microinches) and drive recording densities of 7 million bits per square inch. We're sure he would

have nodded approvingly at the "compliant" head-to-disk interface we designed to purge contaminants and eliminate the possibility of catastrophic head crashing.

Certainly he would have appreciated how we combined a complex of other sophisticated techniques with his—for instance, closed loop servo control of head positioning, imbedded sector servo, rotary voice coil actuator and a powerful error correction design—and wound up with such an amazingly simple yet dynamic storage device.



The Bernoulli Box and the bottom line

The beauty of The Bernoulli Box has to do with more than just *more storage*, although 10 MB worth per IOMEGA cartridge is an impressive opener.

It also has to do with *more reliable storage*, *versatile storage* and, bottom line, *more economical storage*, all of which The Bernoulli Box delivers handily.

It has to do with *more storage applications* in which you can put The Bernoulli Box to work.

- *Primary storage* that easily matches the performance standards of the rigid disk drive.
- *Back-up storage* that lets you dump a 10 MB hard disk file onto one IOMEGA cartridge in a couple of minutes rather than the couple of hours that a floppy disk would require.
- *Archival storage* that's economical and convenient thanks to the lowest-cost cartridge on the market today.

The Bernoulli Box. From IOMEGA. Designed to smartly complement the looks of the IBM XT, featuring full software support for DOS 2.0. Without question, beside the IBM XT and XT, this is the best box you can buy.



The Bernoulli Box Score.

Here is a brief feature/benefit recap that proves what the winning mass storage subsystem is.

Features	Benefits
<ul style="list-style-type: none">▪ Flying Media Recording▪ Rotary Voice Coil Actuator▪ Track Following Closed Loop Servo▪ Unique RLLC and Equalization Circuits▪ Defect Management▪ Design Simplicity	Highest performance, reliability, and areal density of any removable disk drive.
<ul style="list-style-type: none">▪ Flexible Media	Lowest-cost 10 Mbyte cartridge.
<ul style="list-style-type: none">▪ Unique Flexible Media Stabilization▪ Flexible Media	More resistant to shock and vibration than any other fixed or removable disk drive.
<ul style="list-style-type: none">▪ Media Compliance	Highly resistant to contamination.
<ul style="list-style-type: none">▪ No Air Filtration	Fastest start/stop (cartridge replacement) time of any high performance disk drive.

Daniel Bernoulli would have loved these specs:

Subsystem

Voltage	115 VAC, 60 Hz
Operating Temperature	15-32°C (60-90°F)
Capacity—User Available	20 Mbytes
Start/Stop Time.....	3/6 Seconds

Cartridge

Operating Temperature	15-32°C (60-90°F)
Capacity	10 Mbytes
Spare Capacity.....	900 K
Storage and Shipping Temperature.....	10-52°C (50-125.6°F)
Relative Humidity (Non-Condensing).....	10 to 90%
Shock	Cartridge can be dropped from 36" max. onto a smooth, clean, hard surface.

Dimensions

	Height	Width	Depth
Subsystem	140 mm (5.5 in.)	495 mm (19.5 in.)	480 mm (18.9 in.)
Cartridge	18 mm (0.71 in.)	209 mm (8.23 in.)	280 mm (11.02 in.)
Flexible Disk		Diameter 198 mm (7.8 in.)	Thickness 0.080 mm (0.003 in.)



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